

**DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA**

-----  
**INTERDEPARTMENT CORRESPONDENCE**

**FILE:** NH000-0001-04(062), Spalding County  
P. I. No.: 332890  
SR 3/US 19 Turn Lanes @ SR 16

**OFFICE:** Engineering Services

**DATE:** February 9, 2009

**FROM:** Ronald E. Wishon, Acting Project Review Engineer *REW*

**TO:** Michael A. Haithcock, P.E., Assistant State Consultant Design Engineer  
Attention: Karyn Matthews, Project Manager

**SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES**

Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. Incorporate alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>ROADWAY (RD)</b>				
R-1& R-11	Retain the existing curb and gutter on the northeast side of SR 16.	Proposed= \$16,874 Actual= \$147,231	Yes	This should be done.
R-2	Eliminate the raised concrete median on SR 16 bridge in order to widen the two SR 3/US 19 southbound left turn lanes.	Proposed= \$4,632 Actual= \$57269	Yes	This should be done.
R-3	Retain the existing SR 3/US 19 southbound exit ramp and widen as needed in lieu of relocating 33 feet west.	Proposed= \$249,667 Actual= \$416,307	Yes	This should be done.
R-4	Design a single access to the properties using Carver Road as a common access.	\$12,980	No	Presents circuitous route to homes. Creates issues with property division. Will require redesign costs.

ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>ROADWAY (RD)</b>				
R-5	Eliminate curb, gutter and sidewalks on the northwest side SR 16.	Proposed= \$34,159 Actual= \$139,802	Yes	This should be done.
R-6	Use 12-foot wide in lieu of 16-foot wide shoulders on SR 16.	\$168,070	Yes	This should be done.
R-7	Construct the intersection on SR 16/SR 3/US 19 southbound side using concrete pavement.	(\$12,544)	Yes	This should be done. This will match the concrete pavement on each end. GDOT Construction Division endorses this recommendation.
R-8	Use grassed medians in lieu of concrete.	\$62,851	Yes	This should be done, may need to clarify. Contingent upon comments.
R-9	Use 3:1 slopes in lieu of 2:1 where possible on southside of SR 16.	Design Suggestion	No	Based on updated survey, guardrail would be required. Carver Road can be done.
R-10	Redesign curve KC 131 for the superelevation transition length and drainage structure.	\$5,143	No	Additional construction cost is \$18,619. Additional redesign work needed.
R-13	Reduce the width of the SR 3/US 19 southbound entrance ramp by four feet.	Proposed= \$227,348 Actual= \$17,640	Yes	A four foot reduction from 20 feet to 16 feet does not work. A two foot reduction from 20 feet to 18 feet does work.
R-14	Make the SR 3/US 19 southbound entrance radius longer to improve left turn movement.	Proposed= (\$1,386) Actual= (\$9,885)	Yes	This should be done.
R-15	Use 11-ft. wide lanes in lieu of 12-ft. wide lanes on Carver Road.	\$42,880	No	High accident rate, safety issue. Existing Carver Road has 12 foot lanes. School bus route.
R-16	Keep the existing Carver Road as a right-in/right-out access and remove the current right-in/right-out to the bank entrance.	Design Suggestion	No	Safety issues. Within limited access area.

ALT No.	Description	Savings PW & LCC	Implement	Comments
<b>ROADWAY (RD)</b>				
R-17	Use 6"x24" curb and gutter in lieu of 6"x30".	\$19,360	No	Additional costs to redesign drainage. Seven additional drainage structures required at a cost of \$17,877.
R-18	Start the second left turn lane before the traffic signal on the east side of the SR 16 bridge.	Design Suggestion	Yes	This should be done.
<b>TRAFFIC (T)</b>				
T-1	Eliminate the sidewalk along entire north side of SR16.	Proposed= \$51,435 Actual= \$409,083	Yes	This should be done.
T-2	Eliminate sidewalk on one side of relocated Carver Road.	\$25,780	Yes	This should be done.
T-3	Keep the existing Carver Road open and make a right-in/right-out access to SR 16. In addition, Tee-in the relocated Carver Road to existing in lieu of merging.	\$688,173	No	Recommendation would result in taking the house anyway. The cost savings shown indicate saving the house.
<b>BRIDGE (B)</b>				
B S-1	Reduce the width of the SR 16 bridge by reducing the median width.	Proposed= \$166,794 Actual= \$218,743	Yes	This should be done.
B S-2	Minimize the intermediate pier piling conflicts with the existing piles.	Design Suggestion	Yes	This should be done.
B S-3	For Maintenance of Traffic during construction, use two lanes of traffic in each direction in phase 1.	Design Suggestion	No	Temporary barrier cannot be bolted through the flanges of the new Bulb Tee beams and still leave enough room for staging.
B S-4	Remove the sidewalk from the north side of the SR 16 bridge and retain a 6-foot wide shoulder.	Proposed= \$18,911 Actual= \$13,191	Yes	This should be done.

A meeting was held on February 6, 2009, to discuss the above recommendations. Michael Haithcock, Karyn Matthews, and Tom Cox with the Office of Program Delivery and Mark Hanson, Helen Hawkins, and Paul Cook with Columbia Engineering and Ron Wishon, Lisa Myers and Douglas Fadool with Engineering Services were in attendance.

Approved: Gerald M. Ross Date: 2/10/09  
Gerald M. Ross, P. E., Chief Engineer

REW/DMF

Attachments

c: Genetha Rice-Singleton  
Michael Haithcock  
Stanley Hill  
Karyn Matthews  
David Norwood  
Tom Cox  
Paul Liles  
Bill Ingalsbe  
Bill DuVall  
Joe King  
Paul Alimia  
James Magnus  
Lamar Pruitt  
Craig Sewell  
Ken Werho  
Lisa Myers  
General Files

**DEPARTMENT OF TRANSPORTATION**  
**STATE OF GEORGIA**

---

INTERDEPARTMENT CORRESPONDENCE

**FILE** NH000-0001-04(062), Spalding County **OFFICE** Atlanta  
PI No. 332890  
SR 3/US 19 Turn Lanes at SR 16 in Griffin **DATE** January 12, 2009  
*Michael A. Haithcock*  
**FROM** Michael A. Haithcock, P.E.,  
Assistant State Consultant Design Engineer  
**TO** Ronald E. Wishon, Acting Project Review Engineer  
Attention: Lisa Myers, Design Review Engineering Manager/VE Coordinator  
**SUBJECT** VALUE ENGINEERING STUDY – FINAL REPORT RESPONSE

Below are the responses to the Value Engineering Study conducted on November 3-6, 2008 for the above referenced project. Each comment was studied and addressed by both the Department's Project Manager and the Consultant's Project Manager:

**SR 3/US 19 Turn Lanes at SR 16 in Griffin**

**ROADWAY:**

*Value Engineering Roadway Alternative Nos. 1 & 11 – Retain the existing curb and gutter on the northeast side of SR 16.*

**COMMENTS:** The recommendation of retaining the existing curb and gutter on the northeast side of SR 16 has been reviewed and considered. The northeast side of SR 16 from STA 152+68 LT (intersection of SR 16 at the northbound ramps) to STA 157+93 LT has existing rural shoulders with guardrail. The existing curb and gutter begins at STA 157+93 LT and extends beyond the project limits towards downtown Griffin. There is a potential cost savings by retaining the existing rural shoulder and guardrail, which will minimize the impacts to the wetlands. The proposed 20-foot extension of a 7 x 6 box culvert, curb and gutter, sidewalk, drainage structures, and the required ROW will be eliminated. The amounts of earthwork and asphalt overlay will be reduced significantly. The K-value for the proposed vertical sag curve to the east of the bridge will be lower, thus reducing the overlay section by approximately 400 linear feet. The existing SR 16 profile must be raised several feet to accommodate the new bridge's vertical clearance over SR 3/US 19 on the east side. The existing splitter islands at the northbound ramps will need to be replaced. The new construction cost savings would be \$147,231 versus the estimated \$16,874 from the VE study.

(We recommend the implementation of a variation of this design alternative contingent upon above comments).

*Value Engineering Roadway Alternative No. 2 – Eliminate the raised concrete median on SR 16 bridge in order to widen the two SR 3/US 19 southbound left turn lanes.*

COMMENTS: The elimination of raised concrete median on the SR 16 bridge to provide dual 15-foot left turn lanes will be beneficial for the high truck traffic using these lanes. However, this will result in an abnormally wide double yellow line and it may also require a 2-foot wide striped island to maintain the originally proposed overall bridge width to avoid shifting all the approaching lanes, including the left turn lanes. It will be more cost efficient by reducing the overall bridge width by 2 feet and maintaining a standard double yellow line. The new construction cost savings for narrowing the proposed bridge by 2 feet would be \$52,637 in addition to the VE study's \$4,632 for the elimination of the raised concrete median, which is a total savings of \$57,269. See Structural Alternative No. 1 for a greater cost savings on the preferred variation of this alternate.

(We recommend the implementation of this design alternate but with reducing the proposed bridge width as stated above).

*Value Engineering Roadway Alternative No. 3 – Retain the existing SR 3/US 19 southbound exit ramp and widen as needed in lieu of relocating 33 feet west.*

COMMENTS: The recommendation of retaining and widening the existing southbound exit ramp will produce a construction cost savings. The approximate 3 foot grade change at the intersection with SR 16 will require significant amounts of leveling to tie in the southbound exit ramp and temporary pavement to allow the ramp to remain open during construction. The existing shoulders are not in compliance with GDOT's current design policy for ramp shoulder widths and additional earthwork will be required to update the shoulders and to tie the new ramp profile grade into SR 16. By keeping the existing southbound exit ramp horizontal alignment, the limits of construction will be reduced by approximately 950 linear feet. This will produce a significant construction cost reduction by reducing the proposed pavement, guardrail, ROW, and earthwork. The new construction cost savings would be \$263,888 in addition to the VE study's \$152,419 which is a total savings of \$416,307.

(We recommend the implementation of this design alternate).

*Value Engineering Roadway Alternative No. 4 – Design a single access to the existing properties using Carver Road as a common access.*

COMMENTS: The recommendation of the design a single access point for three driveways in the vicinity of the intersection with Carver Road and the proposed relocated Carver Road was reviewed. This recommendation to have the residential driveway tied to this single access point will require the property owner to travel approximately 300 feet with multiple turns as opposed to the current design to have the property owner travel only 45 feet with a single curve and tying into the relocated Carver Road in front of their property. This design will also create a safety issue with vehicles using the property owner's driveway as a parking area or

dumping ground because a large portion of the driveway will be located within the existing roadway ROW. Providing access to this residential property owner in front of their residence is the preferred design. The two remaining properties utilizing this single access driveway are a bank and a commercially zoned undeveloped area. Sharing a 450 foot long driveway with two commercial properties may create conflicts as to who will maintain the driveway as well as safety issues with vehicles using the driveway as a parking area or dumping ground. In addition, this single access point creates a longer distance for a vehicle to travel to use the bank than via the new location driveway at the relocated Carver Road. The originally proposed design provides the bank with a new driveway access point, which ties directly into the relocated Carver Road. The bank's existing access point on the existing Carver Road should be removed rather than maintained to share the driveway with another commercial property. Finally, the single access driveway will be sufficient for the remaining commercial property, but the existing Carver Road should be obliterated as not to allow vehicles to use the driveway as a parking area or dumping ground. In addition, both ends of the existing Carver Road would need to have cul-de-sacs to keep vehicles from attempting to drive through the old alignment to access SR 16.

(We do not recommend the implementation of this design alternate).

*Value Engineering Roadway Alternative No. 5 – Eliminate curb and gutter and sidewalks on the northwest side of SR 16.*

COMMENTS: The recommendation to change the northwest side of SR 16 from a 16-foot urban shoulder to a 10-foot rural shoulder was reviewed. This recommendation will also reduce the need for drainage structures and additional ROW acquisition. This recommendation will provide an additional cost savings of \$105,643 for a total cost savings of \$139,802.

(We recommend the implementation of this design alternate).

*Value Engineering Roadway Alternative No. 6 – Use 12-foot-wide in lieu of 16-foot-wide shoulders on SR 16.*

COMMENTS: The recommendation for the utilization of a 12-foot urban shoulder rather than a 16-foot urban shoulder will reduce earthwork, as well as proposed ROW costs. There is one driveway within the project limits on SR 16 requiring a valley gutter, subsequently the sidewalk will be adjusted in that area to provide the correct offset for the sidewalk and valley gutter. Maintenance of the 2-foot grass strip behind the curb and gutter may be a hindrance for state or local governments, but stamped concrete may be used to correct this potential problem, if requested. Although GDOT policies recommend a 16-foot urban shoulder, the Design Policy Manual section 6.6 states that a 12-foot urban shoulder may be used.

(We recommend the implementation of this design alternate).

*Value Engineering Roadway Alternative No. 7 – Construct the intersection on SR 16/SR 3/US 19 southbound side using concrete pavement.*

COMMENTS: Due to the 17% truck volume on SR 16 and SR 16 being a designated STAA route, it is recommended to use concrete pavement where the predominate movement of the trucks are turning. This will minimize the maintenance costs and time delays associated with potential asphalt maintenance repairs. This alternative will also provide a contiguous concrete pad in the area of heavy left turn movements from the bridge through the intersection to the concrete ramp. There are no cost savings for this design and the potential construction costs will be higher than anticipated from the VE study due to the 3-foot of asphalt leveling and then milling of the asphalt to place the concrete pavement. This area is a critical area for maintenance of traffic, therefore the placement of asphalt, removal of asphalt, and placement of concrete are vital to maintaining traffic through this intersection.

(We recommend the implementation of this design alternate).

*Value Engineering Roadway Alternative No. 8 – Use grassed medians in lieu of concrete.*

COMMENTS: The original proposed design already included grassed medians everywhere except where median widths were smaller than 8 feet, as per GDOT Standard M-3, Type C Median Crossover. It has been mentioned that the City of Griffin may be interested in maintaining the grassed medians in the future.

(We recommend the implementation of this design alternate contingent upon above comments).

*Value Engineering Roadway Suggestion No. 9 – Use 3:1 slopes in lieu of 2:1 where possible on the south side of SR 16.*

COMMENTS: The area from STA 156+50 LT through STA 158+50 LT on SR 16 had enhanced survey completed after original cross sections were completed for the VE study. The area now requires 2:1 slopes with guardrail to tie into the existing high fill area. On Carver Road from STA 256+00 LT through STA 257+50 LT, the proposed 2:1 slopes will be modified to 4:1 slopes rather than 3:1 slopes. This area is on new location in a wooded area, therefore, flattening the slopes to 4:1 is safer than using a short 2:1 fill or using a somewhat flatter 3:1 slope. The ROW costs should be minimal in this area.

(We do recommend the implementation of this design suggestion based on the above comments).

*Value Engineering Roadway Alternative No. 10 – Redesign curve KC 131 for the super elevation transition length and drainage structure.*

COMMENTS: Redesigning the super elevation transition length and drainage structures on Carver Road has been reviewed. The super elevation transition lengths have been corrected. Altering the proposed drainage structures in the radii of the Carver Road and SR 16 intersection will increase rather than decrease the project costs. Shifting the drainage pattern for these pipe systems will create increased costs for redesigning the two drainage systems, as well as utilizing 24" and 30" pipes instead of the proposed 18" and 24" pipes. The catch basins will also be deeper than the proposed structures to accommodate the difference in the pipe sizes. This change will increase the construction costs by \$18,619 rather than decrease by \$5,143, as stated in the VE study. Additional costs would also be required to redesign the two pipe systems.

(We do recommend the implementation of this design alternate for the super elevation transition but not for the drainage structure redesign, based on the above comments).

*Value Engineering Roadway Alternative No. 13 – Reduce the width of the SR 3/US 19 southbound entrance ramp by four feet.*

COMMENTS: Reducing the width of the southbound entrance ramp lanes from 14-foot and 20-foot lanes to 14-foot and 16-foot lanes cannot accommodate WB-65 vehicles turning left at the same time, as dictated by Autoturn software. Reducing the southbound entrance ramp lanes to 14-foot and 18-foot lanes will accommodate these design vehicles. We recommend reducing the 20-foot lane to an 18-foot lane. These calculations should have been based on a lane taper rather than the entire length of the ramp. The wider outside lane should taper from a 20-foot lane to a 12-foot lane based on the design speed, then that lane will be held for the remainder of the required 800-foot section for parallel lanes prior to dropping one. The VE used the assumption that the entire ramp length (2320 feet) would be reduced by 4 feet rather than just the lane taper reducing by 4 feet. The construction cost savings based on an 18-foot lane rather than a 20-foot lane would be \$15,435. There would be additional preliminary design rework for this area too, but the costs would be minimal. The VE construction cost savings for reducing the 20-foot lane to a 16-foot lane was \$227,348, but should have been \$17,640.

(We recommend the implementation of this design alternate using an 18-foot lane rather than a 20-foot lane, contingent upon above comments).

*Value Engineering Roadway Alternative No. 14 – Make the SR 3/US 19 southbound entrance radius longer to improve left turn movement.*

COMMENTS: The recommendation for changing the southbound entrance ramp radius on the eastern side of the ramp was reviewed. This suggestion will increase construction costs. It will also provide additional pavement for the dual left turn lanes for vehicles from SR 16 onto the

Project No. NH000-0001-04(062)  
P.I. No. 332890  
January 8, 2009  
Page 6

southbound entrance ramp. The sidewalk and handicap ramp on the east side of the ramp will be shifted slightly southward on the ramp with the new radius. This shift will create a 6' shorter distance for the pedestrians to cross the ramp, which will be safer since the ramp configuration does not have a raised island for the pedestrian refuge. The increased construction costs for this alternate will be \$9,885.00.

(We recommend the implementation of this design alternate).

*Value Engineering Roadway Alternative No. 15 – Use 11-foot-wide lanes in lieu of 12-foot-wide lanes on Carver Road.*

COMMENTS: Reducing the proposed lane widths on relocated Carver Road may create additional hazards. The existing Carver Road travel lanes are approximately 12 feet. With school buses using this roadway, the narrower lanes may cause clearance problems as the buses pass each other in opposite directions on the curves. Also, using narrower lanes may cause the drivers to drive more towards the center of the roadway and shy away from the outside edge of travel. A design variance would be required to use the narrower lanes. In addition, the transition from 12-foot to 11-foot lanes would be in a curve causing unnecessary driver expectation problems on a road heavily traveled by high school aged drivers.

(We do not recommend the implementation of this design alternate).

*Value Engineering Roadway Suggestion No. 16 – Keep the existing Carver Road as a right-in/right-out access to the bank, school parking, and existing properties and remove the current right-in/right-out to the bank entrance.*

COMMENTS: Keeping the existing Carver Road open and making a right-in/right-out access onto SR 16 and teeing in relocated Carver Road will create several problems. First, the right-in/right-out radius will tie into the dedicated right turn lane for the southbound entrance ramp, which is less than 10 feet from the proposed radius return for the southbound ramp, creating weaving conflicts for vehicles on Carver Road waiting to navigate to one of the through lanes on SR 16. Also, right turning vehicles with right turn indicators on to use the ramp rather than Carver Road will confuse drivers. Secondly, the construction limits for teeing in the relocated Carver Road will still require that the first residential property on the southwest side of this new intersection be acquired, therefore the cost savings for this alternate would be greatly reduced. Third, many of the Griffin high School students use Carver Road to access the student parking lot and creating a left turn yield situation onto the relocated Carver Road may increase the accident rate. The existing Carver Road already has a much higher accident rate than the statewide average for similar roadways. Carver Road is also a local alternate roadway for people from the southwest side of SR 3/US 19 wanting to travel to the northeast side, which is where downtown Griffin is situated, without traveling on SR 3/US 19.

(We do not recommend the implementation of this design suggestion).

*Value Engineering Roadway Alternative No. 17 – Use 6" x 24" curb and gutter in lieu of 6" x 30".*

COMMENTS: Although using a 6" x 24" curb and gutter section in lieu of a 6" x 30" section presents a \$19,360 construction cost savings, there will be additional preliminary engineering costs to redesign the proposed drainage areas, structure locations, drainage profiles for the longitudinal systems, cross sections, and plan view. Using the smaller gutter section reduces the gutter spread and will require approximately 7 additional drainage structures at a cost of \$17,877. In addition, with SR 16 having a high truck percentage, there is a potential for additional maintenance costs for the narrower curb and gutter if these vehicles drive over them. For instance, the wider gutter section spreads the additional load over a bigger area, reducing the failure rate. Also the narrower gutter section will separate from the edge of pavement more so than the wider section due to rotation on the outside of the section when a truck travels over the curb and gutter. And finally, GDOT Standard 9032B as well as the Design Policy Manual Section 6.5.3 state that 2.5-feet is the standard width for curb and gutter, therefore a design variance would be required to use the smaller curb and gutter.

(We do not recommend the implementation of this design alternate).

*Value Engineering Roadway Suggestion No. 18 – Start the second left turn lane before the traffic signal on the east side of the SR 16 bridge.*

COMMENTS: Extending the proposed dual left turn lanes to begin prior to the traffic signal at the northbound ramps will help reduce potential accidents and confusion for negotiating the dual left turns onto the SR 3/US 19 southbound ramps. It will also allow for additional storage.

(We recommend the implementation of this design suggestion).

### **STRUCTURES:**

*Value Engineering Structural Alternative No. 1 – Reduce the width of the SR 16 bridge by reducing the median width.*

COMMENTS: Eliminating the raised concrete median on the SR 16 bridge and reducing the overall bridge width by 6 feet provides a construction cost savings without hindering safety, congestion or aesthetics. However, this will require an abnormally wide double yellow line or will require a 2-foot wide striped island to compensate for the remaining 2 feet from the 8-foot raised median section. We propose to reduce the overall bridge width by 8 feet, which will allow for a standard double yellow line, be less confusing, and will be more cost efficient. The new construction cost savings would be \$218,743 versus the VE study's \$166,794.

(We recommend the implementation of this design alternate but with reducing the existing bridge width by 8 feet, as stated in the comments above).

Project No. NH000-0001-04(062)  
P.I. No. 332890  
January 8, 2009  
Page 8

*Value Engineering Structural Suggestion No. 2 – Minimize the intermediate pier piling conflicts with the existing piles.*

COMMENTS: Minimizing the intermediate pier piling conflicts with the existing piles will be a function of the construction staging geometry and the structural efficiency of the intermediate bent designs. The conflicts will be minimized as much as possible during the final bridge design phase.

(We recommend the implementation of this design alternate).

*Value Engineering Structural Suggestion No. 3 – For Maintenance of Traffic during construction, use two lanes of traffic each direction during phase 1.*

COMMENTS: The Columbia team had already considered this option for Maintenance of Traffic during construction and using two lanes of traffic in each direction was not considered possible. A Stage 1 construction width of 33'-6" would be required to accommodate two 10-foot lanes with 2-foot shoulders as the temporary barrier cannot be bolted through the flanges of the new Bulb Tee beams. Widening the Stage 1 construction to 33'-6" would require a longer intermediate bent cap to support the widened section. The longer intermediate bent cap would conflict with the existing intermediate bent 3 caps (available width is too narrow to work at this location).

(We do not recommend the implementation of this design suggestion).

*Value Engineering Structural Alternative No. 4 – Remove the sidewalk from the north side of the SR 16 bridge and retain a 6-foot-wide shoulder.*

COMMENTS: Removing the sidewalk from the north side of the proposed bridge and utilizing a 6-foot wide rural shoulder has potential costs savings due to the reduced bridge width, as well as improving the pedestrian safety through using only one side of the bridge for pedestrian traffic. However, this alternate will require a design exception. Following the GDOT TOPPS 4265-10 policy requires a 10-foot bridge shoulder for rural multi-lane roadways when using a rural roadway shoulder approaching the bridge. If this design alternate is used in conjunction with Roadway Alternate 5 and/or Traffic Alternate 1, then the alternate becomes plausible because these alternates propose to convert the urban shoulder on the north side of SR 16 to a rural shoulder. Without approval of these additional alternates, this alternate becomes invalid. We proposed to utilize a 10-foot rural bridge shoulder on the north side of SR 16, which will increase the overall bridge width by 2 feet when compared to the proposed bridge width. In addition, combining this alternate with Structure Alternate 1, which removed the raised concrete median, will reduce the proposed overall bridge width by 6 feet. For the maximum cost savings with the best safety design, it is recommended that Structure Alternate 1 with an 8-foot bridge width reduction be used in conjunction with this alternate, but utilizing a 10-foot bridge shoulder. Roadway Alternate 5 and/or Traffic Alternate 1 will also be required for this alternate to be valid because the bridge shoulder will need to tie into rural roadway shoulders.

Project No. NH000-0001-04(062)

P.I. No. 332890

January 8, 2009

Page 9

The construction cost savings associated with using a 10-foot rural bridge shoulder versus using a 6-foot rural bridge shoulder across the proposed bridge is \$13,191 versus \$18,911 (which is from VE study), respectively. However, there are additional costs for altering the roadway and bridge footprints, but when combined with other recommended alternates, the redesign costs can become redundant due to the multiple roadway and bridge redesigns required on the other alternates. The construction cost savings for this alternate are \$13,191.

(We recommend the implementation of this design alternate with the above stipulations).

### **TRAFFIC:**

*Value Engineering Traffic Alternative No. 1 – Eliminate the sidewalk along the entire north side of SR 16.*

COMMENTS: The removal of the proposed sidewalk along the north side of SR 16 is a sizable construction cost reduction. However, altering the entire north side of SR 16 from a 16-foot urban shoulder to a 10-foot rural shoulder has a much greater potential costs savings through reducing proposed curb and gutter, sidewalk, earthwork, urban drainage systems/structures, and ROW, as well as fewer impacts to a wetland area. The total construction cost savings for altering the north side of SR 16 from an urban to a rural shoulder would be \$409,083 versus keeping the urban shoulder but removing the sidewalk, which is \$51,435 from the VE study.

(We recommend the implementation of this design alternate with the above mentioned changes).

*Value Engineering Traffic Alternative No. 2 – Eliminate the sidewalk on one side of relocated Carver Road.*

COMMENTS: The elimination of the sidewalk on one side of relocated Carver Road is a construction cost saving. The existing Carver Road does not have existing sidewalk, so placing sidewalk on one side will minimize the number of conflicts at the tie point with the existing roadway. In addition, we recommend placing the sidewalk on the western side of relocated Carver Road because Griffin High School and the student parking lot driveway are on the western side of the roadway. The VE construction cost savings for this alternate are \$25,780.

(We recommend the implementation of this design alternate).

*Value Engineering Traffic Alternative No. 3 – Keep the existing Carver Road open and make a right-in/right-out access to SR 16. In addition, Tee-in the relocated Carver Road to existing in lieu of merging.*

COMMENTS: See comment response for Value Engineering Roadway Suggestion R-16.

(We do not recommend the implementation of this design alternate).

**PRECONSTRUCTION STATUS REPORT FOR PI:332890-**

**SR 3/US 19 TURN LANES @ SR 16 IN GRIFFIN**

PROJ ID : 332890-  
 COUNTY : Spalding  
 LENGTH (MI) : 0.33  
 PROJ NO.: NH000-0001-04(062)  
 PROJ MGR: Matthews, Karyn M.  
 OFFICE : Consultant Design  
 CONSULTANT: Consultant Design (DOT contract)  
 SPONSOR : GDOT  
 DESIGN FIRM: Columbia Engineering

MGMT LET DATE : Sep-10  
 MGMT ROW DATE : Sep-09  
 SCHED LET DATE : 12/22/2010  
 WHO LETS?: Prepare Plans for Shelf  
 LET WITH :

DOT DIST: 3  
 CONG. DIST: 3  
 BIKE: N  
 MEASURE: E  
 BRIDGE SUFF: 66.87, 64.51  
 NEEDS SCORE: 4

**PROGRAMMED FUNDS**

Phase	Approved	Proposed	Cost	Fund	Status	Date Auth
PE	1999	1999	1,110,694.18	Q05	AUTHORIZED	11/4/1998
ROW	2009	2014	8,665,345.94	L050	PRECST	
UTL	2010	2015	395,449.09	L050	PRECST	
CST	2011	2015	22,481,089.85	L050	PRECST	

STIP AMOUNTS	
Phase	Cost
PE	0.00
ROW	926,000.00
UTL	0.00
CST	13,904,000.00

SCHED START	SCHED FINISH	ACTIVITY	ACTUAL START	ACTUAL FINISH	%
11/13/2009	2/24/2009	Concept Development	5/14/1999	10/30/2002	100
	2/13/2009	Concept Meeting	8/27/1999	8/27/1999	100
	8/13/2009	PM Submit Concept Report	9/7/1999	9/7/1999	100
	8/27/2009	Receive Preconstruction Concept Approval	9/9/1999	9/9/1999	100
11/13/2009	6/12/2009	Management Concept Approval Complete	10/21/2002	10/30/2002	100
11/13/2009	6/25/2009	Value Engineering Study	3/25/2008		85
11/13/2009	6/25/2009	Public Information Open House Held			0
11/16/2009	8/13/2009	Environmental Approval	10/24/2002	1/7/2000	24
11/16/2009	8/27/2009	Field Surveys/SDE	12/8/1999		100
11/16/2009	6/12/2009	Preliminary Plans	6/12/2007		39
11/16/2009	6/25/2009	Preliminary Bridge Design	7/12/2007		25
11/16/2009	5/28/2009	Underground Storage Tanks			0
11/16/2009	9/21/2009	404 Permit Obtainment			0
11/16/2009	11/16/2009	PFPR Inspection			0
11/17/2009	12/4/2009	R/W Plans Preparation			0
11/17/2009	12/4/2009	R/W Plans Final Approval	10/27/1999	10/29/1999	100
11/17/2009	10/26/2010	L & D Approval			0
11/17/2009	2/17/2010	R/W Acquisition			0
11/17/2009	9/29/2009	Stake R/W			0
11/17/2009	10/28/2009	Soil Survey			0
11/17/2009	8/6/2010	Bridge Foundation Investigation			0
11/17/2009	7/29/2010	Final Design			0
11/17/2009	8/31/2010	Final Bridge Plans Preparation			0
11/17/2009	9/27/2010	PFPR Inspection			0
11/17/2009	9/27/2010	Submit PFPR Responses (OES)			0

**District Comments**  
 REVISED CONCEPT REFLECTS FULL INTERCHANGE IMPROVEMENT AND REALIGNMENT OF CARVER RD - NEED REVISED PROJECT DESCRIPTION 2-23-01 - L&D  
 10-29-99 NOTICE SENT 8-8-01 -  
 UTS COST EST 5-11-01 - (NR) \$23,600 - MAY BE CONSULTED 8-29-02 - NEED HIST. AND ARCH. FOR NEPA 11/14/02; NEED AOE TO COMPLETE NEPA 10/1/04  
 The original project description required replacing the asphalt in the southwest ramp with concrete and widening for two lanes that then drop down to one lane. Look at different concepts that include replacing all four (4) ramps. Do cost estimate on each concept.

**ADD:** [01R] 12-30-99 LR: 6-22-98 ASSIGNED DISTRICT 3  
**Bridge:** BRIDGE REQUIRED  
**Design:** Columbia Engr Scale down Revised Concept/PPFR plans ongoing  
**IS:** CEI Not App'd NotOnSchdROW/Sep09/ Alimial 2-22-08  
**GPA:** SPALDING SGN UTIL 1-8-01|GRIFFIN SGN UTIL 9-22-98|RESCISSION LETTER SENT TO GRIFFIN & SPALDING 7-22-05.  
**Prog. Develop:** RW STIP AMENDMENT #5 11-07  
**Programming:** PR2/P-2-2-99#1 2-03#2 5-06#3 8-08#4 12-08  
**Railroad:** NO  
**Traffic Op:** SEND PLANS FOR PFPR REVIEW 9/30/05  
**Utility:** Ist to PM 11/03/08  
**DMG:** RECT/REHAB(I,T/R/TRN LANES-CONTROL ONLY)

**Rel. Parcel CT:** 3  
**Under Review:** Total Parcel in ROW System:  
**Released:** Options - Pending:  
 Condemnations- Pend:  
**Acquired by:** DOT  
**Acquisition MGR:**  
**R/W Cert Date:**  
**Cond. Filed:**  
**Relocations:**  
**Acquired:**  
**DEEDS CT:**